March 13, 2018

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: Ex Parte Presentation, *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, WT Docket No. 17-79

Dear Ms. Dortch,

CTIA commends the Commission for its actions to ensure that the infrastructure necessary to support next-generation wireless networks can be rapidly and efficiently deployed across the country. The U.S. wireless industry is expected to invest as much as $275 billion nationwide to deploy 5G, providing a $500 billion boost to the economy and creating three million new jobs.[1]

The record in the above-referenced proceeding demonstrates that one substantial barrier to deploying that infrastructure is the high cost to network providers of regulatory reviews under the National Historic Preservation Act ("NHPA") and the National Environmental Protection Act ("NEPA"). Individual providers documented those costs and explained how they impede deployment, particularly for the small wireless facilities needed to support expanded 4G and new 5G services. The updates to NHPA and NEPA regulatory requirements in the *Draft Second Report and Order*[2] have the potential to speed the benefits of 5G, driving economic growth, creating jobs, and enabling the deployment of new services that will enhance health care, transportation, public safety, and smart cities.[3]

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[1] *Smart Cities: How 5G Can Help Municipalities Become Vibrant Smart Cities*, Accenture Strategy, at 1 (2017).

[2] *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Second Report and Order, FCC-CIRC1803-01, WT Docket No. 17-79 (draft rel. Mar. 1, 2018) ("*Draft Second Report and Order*").

[3] *Id.*

The attached report, *Impact of Federal Regulatory Reviews on Small Cell Deployment*, prepared for CTIA by Accenture Strategy, quantifies the costs of NHPA and NEPA reviews. Accenture surveyed providers to collect data on those costs. Its report underscores that NEPA and NHPA reviews are imposing significant costs on the industry – and that those costs will rapidly increase as the industry deploys the hundreds of thousands of small facilities needed to provide the public with access to advanced wireless services.

Cost of NHPA and NEPA Review for 2017 Deployment. Accenture concludes that, in 2017 alone, providers spent nearly $36 million on NHPA and NEPA reviews of small wireless facilities. This amounts to approximately $9,730 for each small cell that was required to undergo review – nearly one-third of the total deployment costs per small cell of $33,460.

Projected Cost of NHPA and NEPA Review. Based on providers' plans to rapidly accelerate small cell deployments this year and in subsequent years, Accenture estimates that NHPA and NEPA costs will increase to $241 million in 2018. Between now and 2026, if a similar regulatory environment continues, the cumulative costs of NHPA and NEPA review could reach **$2.43 billion**. Modernizing federal reviews of new wireless infrastructure – like the reforms in the *Draft Second Report and Order* – could significantly lower the cost to deploy 5G networks by **$1.56 billion**. While these cost reductions are significant, the true opportunity costs imposed by outdated NEPA and NHPA requirements also extend to delays in deploying next generation networks and realization of the societal benefits that 5G will enable.

* * *

In sum, the attached Accenture Report demonstrates that reducing the regulatory burdens of NHPA and NEPA review for small wireless facilities will generate significant cost savings and could lead to faster deployment of 5G networks, which in turn could drive economic growth and create millions of both short and long-term jobs for Americans.[4] Given the rapid acceleration of small cell deployments and sharp increases in costs related to NEPA and NHPA reviews, it is imperative that the Commission act expeditiously to modernize its rules as proposed in the *Draft Second Report and Order*.

[4] *Id*.

Pursuant to Section 1.1206(b) of the Commission's rules, a copy of this letter and the Accenture Report are being electronically submitted into the record of this proceeding. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Scott K. Bergmann

Scott K. Bergmann
Senior Vice President, Regulatory Affairs

IMPACT OF FEDERAL REGULATORY REVIEWS ON SMALL CELL DEPLOYMENT

MARCH 12, 2018

accenturestrategy

Introduction and Executive Summary

The objective of this paper is to independently assess the impacts of regulatory reviews required for the National Historic Preservation Act and the National Environmental Policy Act (NHPA/NEPA) on 5G small cell roll-outs by U.S. wireless carriers[i]. In assessing the costs wireless carriers incur in relation to these reviews, Accenture found the following:

- 29% of deployment costs are related to NHPA/NEPA regulations when reviews are required
- The industry incurred $36mm in costs for NHPA/NEPA reviews for small cells in 2017
- As small cell deployment grows significantly in coming years, it is projected that wireless carriers will incur $2.43bn in NHPA/NEPA costs from 2018 to 2026
- Savings of $1.56bn are estimated if the proportion of small cells requiring review under NHPA/NEPA could be reduced by two-thirds

Background

This work builds on previous Accenture analysis conducted on 5G: in 2017, Accenture published a point-of-view on how 5G can help municipalities become vibrant smart cities. Accenture not only estimated the benefits to the economy and society, but also looked at the challenges of 5G infrastructure deployment, due to the increased densification required compared to previous generations of wireless technology. With 300,000 small cell deployments expected in the next 3-4 years[ii], it will be critically important to manage the cost structure, which is primarily comprised of real estate and permits, equipment, and construction/deployment. However, in certain cases, there are incremental fees associated with regulatory reviews required for the NHPA/NEPA on 5G small cell deployments. This paper assesses the costs wireless carriers incur in relation to NHPA/NEPA reviews and the subsequent impact to deployment of small cells necessary for a national 5G roll-out.

Methodology

Accenture gathered input from a survey of carriers representing the wireless industry on spend related to NHPA/NEPA reviews and other key data points to understand, estimate and project future spend. This input, together with publicly available research sources and Accenture analysis, was used to extrapolate future impact out to 2026. Where carriers defined specific plans for 2018, these inputs were used to create a bottom-up forecast. Small cell projections from SNL Kagan, released in August 2017[iii], supplemented the view provided by the carriers on longer term deployment forecasts. Accenture created an in-depth view of expected costs related to NHPA/NEPA reviews based on small cell deployment projections out to 2026.

Key Findings – Current Costs (2017)

Results were compiled after anonymizing and aggregating findings across carriers representing the wireless industry. In 2017, nearly **$36mm** in total NHPA/NEPA costs were incurred for small cell deployment reviews. This amounted to an average total NHPA/NEPA cost per small cell reviewed of **$9,730** based on an estimated 3,700 small cells requiring review. It is important to note that many carriers consider the cost impact from NHPA/NEPA reviews when deciding on their deployment strategy and

location selection. With an average deployment cost per small cell of **$33,460**, on average, **29%** of the total small cell deployment costs are related to NHPA/NEPA when a small cell review is required.

Summary Metrics: Wireless Industry NHPA/NEPA Spend for Small Cells	2017
Total Cost of NHPA/NEPA for Small Cell Deployment	$36,000,000
Total # of Small Cells Requiring Reviews	3,700
Weighted Average Total Cost of NHPA/NEPA per Small Cell Reviewed	$9,730
Average % of Total Small Cell Deployment Costs related to NHPA/NEPA	29%

The analysis highlights that the current regulations account for a significant portion of deployment costs when reviews are needed. While the average of $9,730 per small cell review is not as high as a major U.S. telecom's public case where $90,000 in costs were incurred for 6 small cell reviews, implying $15,000 per small cell, in Chicago, the average regulatory-driven costs are high relative to the average total deployment costs for small cells.

Projected Costs (2018 to 2026)

In 2018, projected NHPA/NEPA costs are estimated at $241mm as small cell deployment begins ramping up significantly. It is estimated that carriers will deploy an incremental 86,000 small cells in 2018, a 550% increase from small cells deployed in 2017, to reach a cumulative small cell deployment number of 138,000. True 5G is expected to require hundreds of thousands of small cells, therefore NHPA/NEPA review costs are expected to significantly impact 5G deployment based on Accenture's projections.

If a similar regulatory environment continues (with a similar impact in terms of review costs), where 28% of small cells deployed require NHPA/NEPA reviews with a cost of $9,730 per review (adjusted annually for inflation), cumulative costs from 2018 to 2026 could reach **$2.43bn**. This is based on a total of 769,000 small cells deployed during this period (and cumulative small cells deployed of 821,000 since 2016), of which approximately **214,000** will require reviews[iv].

	2018(F)	2019(F)	2020(F)	2021(F)	2022(F)	2023(F)	2024(F)	2025(F)	2026(F)
Cumulative Small Cells Deployed by Year End ('000s)	138	200	273	363	468	550	635	722	821
Total In-Year NHPA/NEPA costs ($mm)	$241	$176	$218	$275	$328	$263	$285	$297	$349

Opportunity Costs

To understand the impacts, Accenture sized the opportunity cost of NHPA/NEPA reviews, by providing an illustrative example of what a change to the regulatory environment might be worth. For illustrative purposes only, a scenario was calculated to size the impact if regulatory reforms could reduce the proportion of small cells requiring review, a key driver of costs, by nearly two-thirds. The result would be a total review cost projection of $875mm, unlocking savings of **$1.56bn** over the current projection of $2.43bn. The opportunity costs of NHPA/NEPA reviews should not only be thought of in terms of dollar savings and reinvestment in additional small cells, but also in terms of speed to deployment. Carriers could provide 5G coverage at a much faster rate, in turn contributing to earlier economic growth and creating more short and long-term jobs for U.S. citizens. The true 'opportunity cost' goes beyond the regulatory fees incurred by carriers and includes delays that impact the realization of the societal benefits enabled by 5G technology.

Assumptions

Assumptions were made to standardize data and metrics from carrier inputs. Carriers often provided inputs as ranges or estimates – Accenture averaged these inputs, weighted where possible, for the purposes of creating an industry average and forecast. All figures have been rounded, as to not imply a level of accuracy that does not exist.

Inputs from carriers for 2017 included NHPA/NEPA costs, number of small cell deployments, proportion of small cell deployments requiring reviews, proportion of total deployment costs related to regulatory reviews when a review was required, and other contextual information related to carriers' small cell deployment plans. Accenture analysis and assumptions were added to estimate 2017 costs and third-party data and analysis were added to forecast costs through 2026.

As carriers may consider the cost impact from NHPA/NEPA reviews in their deployment strategies, the number of small cells requiring review could change depending on these deployment plans. For example, carriers may avoid locations, or slow deployment plans, due to the cost impacts. Based on initial observations, we have conservatively estimated that less than one-third of small cell deployments (28%) required a review in accordance with NHPA/NEPA in 2017. That percentage of small cells requiring review was assumed to stay the same in every year from 2018 to 2026; however, if carriers cannot continue to deploy based on a potential cost avoidance strategy as may have been exercised previously, this number could be higher and further increase projected costs.

Costs of compliance per small cell provided are on average. It cannot be assumed that every node costs the same to deploy as location and other deployment-specific decisions introduce variability into review costs. Therefore, the NHPA/NEPA cost averages are approximate based on data compiled to date. Future projections assume the current regulatory environment remains the same in terms of proportion of small cell deployments requiring review as well as cost per review increasing year-over-year with an inflation growth assumption of 3%.

Conclusion

Accenture's previous research on 5G outlined the potential economic benefit and job growth, as well as the key challenges for deployment, which included local permitting and regulations, access to public rights of way, and fee structures[v]. A portion of these challenges is now quantified. Should regulation remain unchanged, Accenture estimates that the industry could spend an incremental $2.43bn related to NHPA/NEPA reviews through 2026. However, if regulatory reforms could reduce the proportion of

reviews required by nearly two-thirds, $1.56bn would be available for redeployment over this period, which could have a substantial impact on 5G deployment and overall benefits to the U.S. economy.

Contributing Authors: Accenture Strategy and Accenture Network Practice

[i] Commissioned by CTIA®

[ii] SNL Kagan, *Bring on the midband: Small cell and tower projections through 2027*, August 30, 2017, By John Fletcher

[iii] SNL Kagan, *Bring on the midband: Small cell and tower projections through 2027*, August 30, 2017, By John Fletcher

[iv] SNL Kagan, *Bring on the midband: Small cell and tower projections through 2027*, August 30, 2017, By John Fletcher

[v] Accenture, *How 5G Can Help Municipalities Become Vibrant Smart Cities,* 2017 https://www.accenture.com/t20170222T202102__w__/us-en/_acnmedia/PDF-43/Accenture-5G-Municipalities-Become-Smart-Cities.pdf